

CHAPTER 4

FOREST USERS: OWNERS, WORKERS & EMPLOYEES, AND THE GENERAL POPULATION

A forest policy that aims at effecting the regulation of forest utilization and protection, has to include those stakeholders directly involved with the forest. Forest users comprise greatly varying social groups from forest owners to those working in forestry and the general population. As a rule, each individual belongs to several groups of users. For example, a forest owner assumes the social role of owner, yet in many cases he is at the same time also a hunter, farmer, conservationist or hiker. In modern society, the division of a person's activities into different roles is taken for granted. Since each role involves different forest-related activities, policy making should begin with the various kinds of forest users.

Forest users, program goals and interests are closely interrelated (cf. Illustration 2). Forest users orient their interests, which include ecological, economic and social dimensions, towards the forest, and these are either supported or limited by program goals. In as far as their interests succeed, they are realized as forest benefits which often become the subject of conflict. Private and public forest owners largely agree with the program objective of timber production. They are neutral or negatively inclined to the objective of protection; and generally sceptical towards the objective of recreation. Conflicts arise especially when forest programs place economic limitations on forest owners. This is also the reason for the disapproval of nature protection programs which are against timber production or reject high-yielding foreign tree species, e.g. However in the ecological sector, there is largely agreement on environmentally compatible forestry management and forest protection concepts, especially regarding public forestland. The goals of hunting programs contrast with the interests of forest owners in many ways. Hunting is valued by many forest owners for both economic and social reasons. Yet they do not want to do without profitable timber production. Conflicts concerning damage caused by browsing wild game not only arise due to the disparities between forest and hunting programs, but also because of the owner's internal interests. The interests of forest sector employees do not basically differ from those of forest owners with regard to forest, nature protection and hunting programs,

since their focus is on financial proceeds. Differences arise concerning profit distribution and workload. This calls for programs pertaining to labor policy and social politics.

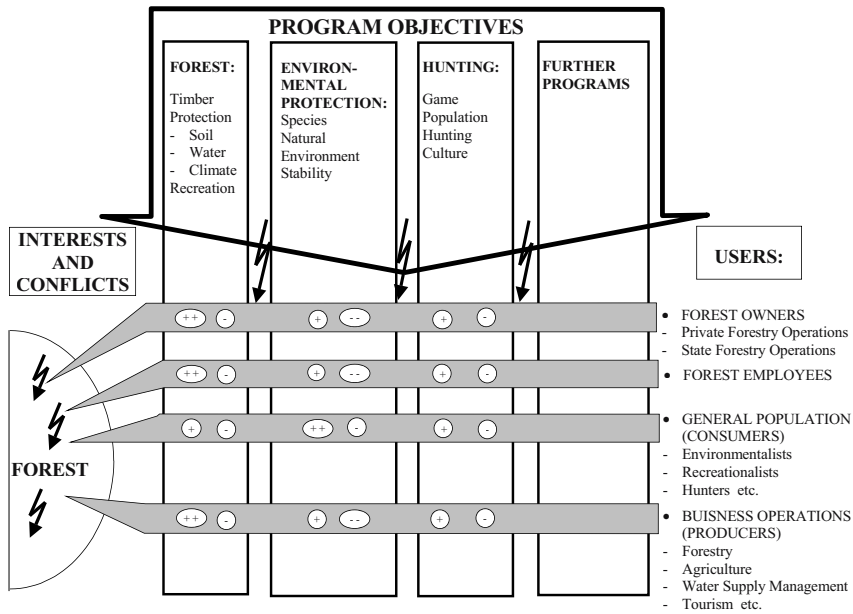


Illustration 2: Program Objectives, Interests and Those Benefiting from Forest Policy

The general population forms a large and varied group. They have in common that they benefit from the effects of the forest, whereby their consumption is partially regulated by markets and partially by means of other social or political control mechanisms. In this sense, most of the general population's nature protection interests are realized through nature protection programs, whereas the legal right of access to forests facilitates forest recreation. Public groups with hunting interests will find their major support in hunting policy programs. However environmentalists and hunting adversaries, which are also significant public groups, are opposed to hunting interests. The forest program objectives of protection and recreation mainly conform with the interests of the general population, whereas timber production awakens far less interest in the average person.

Another group of users constitutes the sectors of timber production, pulp & paper industry, agriculture, water provision and tourism, among others. These sectors give rise to special interests in forests, e.g. timber, forest meadows, water provision, protection for transportation routes, or landscape and recreational space. Forest programs provide positive incentives for these sectors by substantially promoting the use of forests for protective and recreational functions. As a rule, nature protection programs are opposed to economic exploitation interests.

Development and opportunities for regulating a specific forest conflict depend upon the stakeholders involved and the particular ways they want to use a forest. Neither forest owners nor members of the general population pursue solely economic or ecological interests. Each stakeholder has his own bundle of interests, the diversity of which results in conflicts as well as potential for compromises. Since the stakeholder or forest user defines and protects his self-interests, he is the key factor in forest policy. As forest users, all the diverse stakeholders have to be taken into consideration with each of their special interests and implementation tools. A preliminary overview is provided by the following elaboration of the three groups of forest users who are directly active in the forest: forest owners, forest workers or employees, and the general population.

4.1. Forest Owners

The phenomenon of property ownership has characterized the order of society and economy as a whole. In law it is given a place of priority and counts among the most important factors of forest economics. In Germany the law differentiates among the following forms of ownership: state forests, corporate forests and private forests. The purpose of these categories is to standardize the various rights and obligations of the respective forms of ownership (Klose, Orf 1998, p. 119). In Germany, as the following example shows, all three categories are well represented with a share of 33%, 20% and 47% each (cf. Example 2). The following example is distinguished by the historical peculiarities of forest ownership in Germany and does not reflect other European countries. It is, however, suitable for illustrating the universally valid theoretical idiosyncrasies of the owner.

Example 2: Forest Ownership in Germany 1997 (Source: Federal Ministry of Food, Agriculture and Forestry: Forst Holz 1997/1998, Bonn)

➤ *Type of ownerships*

	<i>Forest area in million hectares</i>
<i>State Forests</i>	<i>3.6</i>
<i>Corporate Forests</i>	<i>2.1</i>
<i>Private Forests</i>	<i>5.0</i>
<i>Total</i>	<i>10.7</i>

➤ *Enterprises According to the Size of Forest Area*

	<i>Number</i>	<i>Forest area in million hectares</i>
<i>Less than 1 hectares</i>	<i>86,396</i>	<i>0.04</i>
<i>1-50 ha</i>	<i>350,898</i>	<i>1.85</i>
<i>50-200 ha</i>	<i>6,790</i>	<i>0.66</i>
<i>200-1000 ha</i>	<i>3,187</i>	<i>1.39</i>
<i>Total</i>	<i>1,526</i>	<i>5.55</i>

Note: Including the smallest forest area under 0.5 hectares, which is not recorded in the statistics, the total number of the forest owners of less than 50 hectares is estimated about 1.2 million hectares.

➤ *Cooperatives*

<i>Number</i>	<i>5,317</i>
<i>Members</i>	<i>435,593</i>
<i>Forest area belonged to the enterprises</i>	<i>3.14 million hectares</i>

In Germany, state-owned forests have been organized into seventeen independent forest administration bodies, each answering to the respective public administration. The sixteen state forest administration bodies and the national forest administration are like large forestry enterprises in keeping with Central European standards. In Bavaria, e.g., they manage a forest area encompassing 730,000 hectares and in Lower Saxony 340,000 hectares (cf. Appendix 3: Forest Ownership Distribution in Selected Countries). Their shares in the corresponding forestland of each state, spanning from 13 to 40%, indicate a strong presence. Shares of state forest over 30% are high in comparison in Europe. The role of the state as a managing forest owner is closely connected to its role as public administrator of all the forestlands. Ownership gives the state additional opportunities to intervene by managing the utilization and protection of its own forests. Above and beyond its economic goals, the state-owned forest has an obligation towards the public functions of a forest, in particular those of recreation, nature conservation and protective cover.

Corporate forests are also publicly owned forests that are usually in the possession of municipalities. Their size ranges from a few hectares to several thousand. In total, the share of corporate forests is largest in the German states of Rhineland-Palatinate, Baden-Wuerttemberg and Hesse at 54%, 41% and 37%. The goals of the municipal owners are characterized by the public duties which differ significantly between cities and rural municipalities (Krott & Nilsson 1998). However the protective and recreational benefits of a forest are particularly important for the population of a municipality, but less so, the production goals (Lückge 1991; Henne 1992). In addition to the municipalities, other public corporate bodies have forests in their ownership. In particular, this includes "Realverbände", which are a legally protected form of community/joint ownership and amount to 10% of the forests in Lower Saxony.

Private forests constitute the largest group in Germany, with regard to their share of forests. They can be divided into private operations of greatly differing scales. Around 1200 forest owners have forestry enterprises of over 200 hectares; 350,000 forest owners have forestlands of between 1 and 200 hectares in size; and 850,000 owners have very small forests of less than 1 hectare (Niesslein 1985, p. 32; Volz & Bieling 1998). In addition to the economic and social position of their owners, the size of the forestry enterprise significantly determines the objects they set pertaining to their forests. The large-scale operations are mainly specialized in forestry production. The owners of medium-scale forests are traditionally engaged in

farming and manage their forests accordingly. The economic position of small forest owners is strengthened by forming cooperatives, of which 5300 share 30% of the forestlands. Over the past decades many small forest owners have lost their farming function and value their forests according to different standards in contrast to those who are involved in agricultural and forestry production.

In 1990 the new federal states in the East of Germany contributed around 3 million hectares of forestlands to the former territory of the Federal Republic of Germany. These forests, which were managed entirely by the state in the scope of the planned economy, and were expropriated from their owners before the end of WWII (8th May 1945) or after the founding of the German Democratic Republic (1949), are to be returned to the states, municipalities or private owners according to the Unification Treaty (Zundel & Schwartz 1996). The national forest that was expropriated in the scope of the land reforms between 1945 and 1949, and encompasses 672,000 hectares, will not be restituted, instead it will be privatized through sale. Restitution and privatization though sale are intended to create privately owned forests which are comparable to those in the old states of the Federal Republic of Germany.

The political role of the owner, who is at the center of focus in this discourse, superimposes the legal and economic diversity of forest ownership. In political terms, ownership is a form of domination (Burghardt 1980) which encompasses both the legal term of "title-holder," i.e. the holder of rights, as well as that of the "landlord" who has the power of control over his own lands.

The forest owner is the stakeholder who has the immediate power of control over a certain forest.

The power of control gives the owner the right to refute claims of others to his forest or their attempts to utilize it. By reserving the right of access to the owner, forest ownership very effectively regulates many conflicts of use. Without setting further goals, it provides a political guideline on how to proceed in the face of conflicts. One certain individual, namely the owner, decides upon the desired means of utilization. Without the social "institution" of property ownership, conflicts would constantly arise among those involved regarding who may determine the means of forest utilization.

The simplicity of this principle and its general applicability have made it a major institution in all societies with the concept of property ownership.

Freedom of choice is an aspect of ownership. The owner's principle freedom of decision does not depend upon his values or expertise. It is even possible that a specific forest owner has no objectives at all in mind for his forest. Freedom is a major component of ownership. The degree of freedom indicates whether the owner actually has attained the power of control over his forest, or whether he may only formally call himself owner, although he is obligated to follow stipulations, e.g. those made by the state. Privately owned forest property, which is fully managed according to state programs, does not involve the power of control and therefore does not comply with the above-defined quality of ownership. The handing over of decision-making power to private forest owners is a necessary political measure in the scope of privatizing communist planned economies (Krott, Marosi & Goyla 1996). The political system has to go through this process, if the forest sector is to be based on private property. Only if the owners have achieved this principle freedom, are policy making and the market economy called upon to set up a framework in which forest ownership can develop to usefully fulfill public objectives. According to the manner they function, economic and political control are targeted to freedom of choice in ownership.

The owner's authority over his own forest does not have to be asserted by him alone, instead it must be politically guaranteed. A central power, no matter how it be organized, supports the realization of owners' claims (Willgerodt 1980). Political guaranties provide an essential aid. However this safeguarding also requires the owner to take special measures. In practise, property claims require the owner to make a considerable effort which far surpasses maintaining the property delineation on site. The relatively large sizes of property and multiple points of contact with other users necessitate a great deal of engagement to secure property, and particular effort is required in highly frequented regions with settlements and individuals seeking recreation.

The freedom of decision in asserting one's rights against other claims determines how an owner manages his forest. The result depends upon the owner's interests as well as his instruments of power. Both areas can be more closely characterized for forest owners in Germany.

4.1.1. The Interests of Forest Owners

A forest owner's interests are geared towards maintaining his own authority as well as the various forms of utilization he expects from the forest.

- **Maintaining one's own authority**

Owners refute any attempt made by others to influence them. Like any other form of authority, forest ownership is constantly challenged by other stakeholders' claims. Certain social groups would like to use the forest for their own purposes, in particular, recreation. The state stipulates general objectives – environmental protection or proper forest management – which are standardized for forest owners as decision-making guidelines. The forest owner has to assert himself in the frame of his own forestry enterprise. Here it is the managing staff and the workers who hope to realize their self-interests in the forest. The diverse expectations made on any forest owner have twofold results.

On the one hand, there are various different property rights. The owner is forced by the state and the other stakeholders to share many areas of his decision-making power, or to make his decisions dependent on certain preconditions. These limitations have been standardized by law, and they result from the limits set by the information status and the physical presence of the owner. For instance, a small forest owner, whose formerly expropriated forest has been officially returned to him, is not able to take on his role as owner until he has been on site and seen his property, as well as having access to forestry expertise. With these preconditions, which can in practice only be fulfilled with great effort over the course of denationalization, the owner cannot take over the formal authority of his right of ownership, and he remains dependent on state advisory services in order to informally fulfill the role of the actual owner.

Secondly, the owner is forced to actively recognize the components of his property and to defend it against competing influences. The forest owner always aims to secure his power of decision, or to ensure that other stakeholders cannot secure any power of decision in unregulated areas. Simply protecting one's power of decision, or in other words, maintaining one's own authority, determines the majority of political conflicts regarding forests. Independent of any objective problems, whether they pertain to environmental protection of forests, access to forests for those seeking recreation, or ensuring of sustainability, the owners and their political representatives always attempt to maintain the largest possible freedom of

influence. This interest counts among the lasting and uniform objectives of forest owners and can also be presupposed for the future.

- **Sustained value**

In general, property has the potential of being maintained on a long term. This long-term orientation is particularly relevant for landed property or forest property. The land may be put to use, but the assets remains the owner's property. The assets of forest property are perceived by the owner in physical or economic terms. The natural asset of forest property may be precisely assessed nowadays in many aspects without great difficulty by using forest surveying and assessment techniques. The details and dynamics of stock, increment and state of soil are factors known to any interested forest owner today. However, new aspects may arise, the assets of which are usually unknown to forest owners. For instance, there are very few detailed surveys of the species of flora and fauna found in forests and their significance for biodiversity. Forest owners have the formal authority over an ecological asset of which only very few of them actually have any practical knowledge. Information on the economic assets of a forest is even more incomplete. The valuation of a forest is a considerable problem for experts, mainly in connection with its long-term production period (Bergen et al. 1998). The benchmark figures change so drastically in a century, especially the prices for the valuation of forest assets, that property assessment at any specific time always underlies a high degree of uncertainty. However, if the statement of profit and loss does not include assets, this means that the owner, whose forestry enterprise is characterized by high operating assets in comparison to yield, will not know the most important economic key factor. The interest in maintenance is thus more strongly geared towards natural assets, i.e. the maintenance of a forest with certain distinguishing traits. A wealthy stock of diverse species and structure, which can rejuvenate itself, is considered by owners to sustainably secure forest property, without consideration of its economic valuation (Brabänder 1995, p. 279).

The highly incomplete information that German owners have on their forest property assets does not mean these owners have a low estimation of their assets. In contrast, everything indicates that German forest owners are geared towards maintaining their forest property assets on a long term basis. Stocks increase in both state and privately owned forests in Germany, except in times of crisis. The assets of potential yields have the advantage for the individual owner that they are sustainable over many years and can be turned

into sales proceeds over a short term when needed. Forest assets do not attain a comparably high rate of interest, however they are estimated to be very secure according to past experience in Central Europe with the devaluation of currency as well as stocks and bonds. In keeping with the taxation laws in Germany, forest property assets are not directly taxed. This exemption from taxation is highly valued by forest owners (Bergen et al. p. 31). These economic advantages additionally promote the forest owners' strong interest in sustaining natural forest assets.

Sustained ownership of forest property can only be secured by means of inheritance. Inheriting property has become the most common way of obtaining forest assets. Despite its legal security, the course of inheritance always constitutes an unstable phase of property ownership. The authority of the new owner has to be asserted vis à vis other potentially interested parties and the state. Inheritance conflicts, the distribution of assets and the taxes levied by the state have an influence on forest property. The division of forests into many small plots has significantly affected their economic utilization in many regions.

- **Capitalized income value**

A forest provides its owner with various means of achieving financial proceeds. Even if the state taxes a portion of the proceeds, a key factor of property is that all proceeds from it belong to the owner. This rule is not at all taken for granted politically; instead it constitutes a significant broadening of the definition of ownership, which is decisive for its role in the market economy. The prospect of proceeds has a great influence on forest owners. In economic terms, they are able to increase their property assets by targeting the means of utilization that promises the highest profits. This is a given opportunity for forest owners. In Germany, however, owners only pursue this objective while simultaneously considering other important limiting factors (Brabänder 1995).

The official annual figures for forestry enterprises of more than 200 hectares mainly indicate positive net profits for private forests over the past decade, whereas state forests have a negative net income, as a rule (Deutscher Bundestag 1998, p. 59). The figures for forestry enterprises with forestlands totaling 5–200 hectares in Baden-Wuerttemberg from 1998-1997 indicate an annual net income which varies from positive to negative (Brandl et al. 1998). These business analyses and others suffer from methodological weaknesses, however their results still provide evidence that private forest owners make profits. The single year deficits were covered by the profits

made in other years of the same time period (Brabänder 1995). Profits are an important goal for owners of forests larger than 5 hectares in size. However their interest in maximizing profits is not as strongly developed. Forest assets, which reached a figure of 100-200 billion EURO (Köhler 1994) for the former West German states depending on the specific evaluation method, only achieve a negative net income. Limited to the figures for private forestry enterprises, assets can carefully be estimated at around 50 billion EURO with annual profits of 250 million EURO resulting in interest yields of around 0.5%. Despite the inaccuracy of these estimates, they give evidence that high profits cannot be targeted with forest assets, in contrast to other investments in assets. The inverse state of supply and demand in the conifer timber market also points towards profit making to cover costs without profit maximization. Growing timber prices are not being used to maximize profits; instead the timber supply is being throttled, since the targeted "reasonable" profits can already be achieved with a small volume of turnover (Bergen et al. 1988). Financing forestry enterprises with capital resources gives the owners the leeway to modestly choose their own goal of "reasonable profits" without being pressured by external financiers to maximize profits.

Owners of small forests under 5 hectares have opportunities for making financial profits which are much different from those with larger forestry enterprises. The deciding factor in their financial considerations is not the forest. Instead, their main financial engagement determines how they use their forests. Linking small, private forestry enterprises and farming led to the concept of "agroforestry" (Abetz 1955). The structural changes in agriculture have greatly reduced the number of farmers who own small forests over the past decades, and have resulted in a group of small forest owners without involvement in agricultural production. Today's small forest owners have varying interests in profits due to their greatly differing lifestyles and economic involvement. Financial profits from forests are only important for less than 50% of them according to a survey made in 1999 in Baden-Wuerttemberg (Judmann). For the majority of small private forest owners, forest assets no longer involve having a forestry enterprise geared towards profit making.

- **Sales value**

Owning forest property also includes the prospect of selling the forest and thus achieving an increase in assets. Growing real estate prices can result in large profits for property owners, especially if the property is rezoned from

cropland or forestland to building land for property development. Real estate speculation plays a very important role for property owners (Holzheu 1980). The property increases in value not only according to the market demand, but also in direct relation to the measures taken by the state. Land zoning and road access have a very strong effect on the prospects for property utilization and prices. Property rezoning can also result in devaluation of forestland, e.g. in the face of increased access for tourist recreation purposes. Little is known about the significance of the sales value on the forest owner's decisions. Surveys of small private forest owners have regularly indicated only a very low readiness to sell over the past decades. However, it is questionable to which degree the survey indicates refusal to sell even if there is a corresponding demand by buyers (Judmann 1977).

Above and beyond the sales value of forest property, it also has a general value based upon all the prospective methods of forest utilization. If new prospects arise for forest utilization arise, and there is an ensuing demand, the owner has the right to use them. Taking into consideration the long-term development of a forest and the diversity of its effects, the chances for new means of utilization are not slight at all. The demand for environmental protection or adventure sports has given rise to new uses of forests, however these are generally outside the jurisdiction of the property owner. Nevertheless, the forest owner may still hope that new demands will increase the value of his forest.

- **Sentimental Value**

The sentimental value represents an interest in forests which does not involve any economic exploitation (Burghardt 1980, p. 68). Yet the sentimental value can be transformed into potential sales value or earning power as a result of business activity. For as long as this is not the case, the sentimental value designates a separate interest which has great significance on the activities of forest owners.

In rural communities in Germany, owning forest property has a positive note of prestige. Historically, forest ownership was closely linked to the aristocracy, since other social circles were prohibited from purchasing forestland until the civil revolution. The forest thus bestows prestige upon its owner, which is still often associated with a feudal lifestyle, despite the present-day bourgeois social order. The interdependence of sentimental value on the values of the social environment is particularly clear regarding this aspect. The positive image of the forest owner is only very limited in the new federal states in the East of Germany where the enemy image of the big

landowner was upheld throughout the communist era. The connection of owning land with the tradition of hunting also contributes to the sentimental value for many owners (Schraml 1998). As a consequence of widespread economic exploitation, the owners also often aim at achieving short-term profits from hunting.

The sentimental value is increasing in significance due to the conversion of agricultural lands into small private forests. The highly estimated value of recreation in one's own forest superimposes the interest in financial profits from forest assets for a greatly increasing number of landowners (Judmann 1998). As such, forests are of great importance to their owners; however their financial resources accrue from activities other than forestry operations.

Traditionally, the goals of publicly owned forests do not only aim towards economic exploitation. They follow the foremost objective of "common welfare," as shown in Example 3: Objectives of State Forests. The safeguarding and improvement of the protective and recreational objectives of state forests are called for, even if this is not linked to a profit. The state, as owner, is obligated to realize objectives apart from economic exploitation. The great significance of these objectives for the general populace makes it clear that the aims of public or private owners, which are linked to the term of "sentimental value," do not have less political impact than earning power does.

Example 3: Objectives of State Forests (Source: Bavarian Forest Act 1982, Article 18)

State forests specifically serve the public welfare. Therefore they have to be managed in an exemplary manner. In particular, the responsible authorities are to maintain or establish environmentally compatible, healthy, potentially productive and stable forests. Furthermore, they have to:

- 1. safeguard and improve the protective and recreational functions of the forest, as well as considering the aspects of nature protection, landscape protection and water management, before taking any measures*
- 2. increase timber production, maintain the necessary stock required, utilize the resources according to economic principles, and*
- 3. protect the forest from damage.*

4.1.2 Objective Setting and the Political Tasks of Ownership

An overview of the varying factors of owners' interest in their forests shows that each type of ownership has a variety of objectives. All owners give priority to safeguarding their authority and maintaining of their forest assets, no matter whether they are private or state owners. The objective of making a profit does not dominate, although it is more strongly apparent in the case of private forests. Sentimental values are diverse, however state forests are always geared towards the public task of providing protective and recreational functions.

Setting objectives in the scope of this general state of interests constitutes a multi-faceted process for each owner. Each individual has such difficulty setting his objectives as an owner, that surveys repeatedly indicate a lack of formulated objectives. In cooperative forests, the setting of objectives needs to consider the interests of all those owners involved. A number of responsible persons, who represent the public interests, formulate the goals for public corporations or state administration bodies. Formal processes only result in a list of priorities for the administrative management up to a point. The lack of wide-scoped priorities set by the owner is often criticized in business administration concepts. Business administration gives the owners the chance to autonomously set their objectives, yet at the same time, it criticizes the lack of rational or meaningful goals that are listed according to priority and are free of contradictions. The owners' process of setting objectives only takes place rationally in part. This is valid both for individuals as well as public bodies in which internal conflicts hinder a uniform setting of objectives. The distinguishing feature of property ownership is the freedom of choice in setting one's own objectives, rather than the setting of clear objectives.

Policymakers link great political expectations to forest owners' freedom of decision, both for free enterprise as well as democracy. The market economy is based upon individual autonomous decisions made possible through decentralized ownership of business operations. Its mode of operation will be further elaborated later in the scope of economic instruments.

The major democratic task of private ownership constitutes the distribution of power. Property owners are a counterweight in the face of the central political power. Owners have their own resources for strengthening their independence and can thus participate democratically in political decision making. The tension between private owners and state politics is therefore a political expression of state regulation. At the same time, democracy calls

for a widespread distribution of property ownership. The more highly concentrated property is in the hands of a few individuals, the less they can contribute to a democratic equilibrium. As is the case in the whole of the German economy and society, forest ownership is far from being evenly distributed, since around 1% of the forestry enterprises manage 65% of the forests. The small forest owners, whose number in Germany can be estimated at around 1.2 million (Volz & Bieling 1998), thus have great significance on the democratic objectives of land management policy (Essmann & Niesslein 1996). The equal distribution of property, conducive to democracy, is mutually related to the dwindling concentration of business property in the economy. In Germany this process of concentration has not (yet) begun with forest owners. In contrast, the (re)privatization in the new federal states in the East of Germany has resulted in a great number of small forest owners whose economic problems still need to be solved. The political tasks of private owners are not the same as their economic tasks concerning forests.

4.1.3. The Realization of Owners' Interests

The realization of owners' interests is characterized by the strained relationship between individual freedom and involvement in society. On the one hand, the owner's freedom means that he has to realize his self-interests by himself. On the other hand, politics has created a framework which both supports and limits private ownership.

Within his own bounds, the owner's most important resource is the direct access to his own forest. This is especially evident concerning farmers with small private forests. The owner can go into his forest anytime and fell, plant or tend his own trees without having to ask anyone beforehand. The owner directly controls the activities in his own forest without needing to involve the state or any other stakeholders. Direct access to their own forests gives competent owners a very great margin of action for implementing their own objectives. Such owners are best informed about their own forests and their potential utilization. They take the initiative and directly manage the numerous forms of utilization in their own forests. The proceeds also go directly to the owners. In essence, forest property ownership functions without outside intervention. Political regulation, in contrast, only takes hold in a later phase. Policymakers first have to inform themselves about the business activities in order to implement their instruments. The great number of owners and the daily measures they take already imply that activities

concerning forests are mainly determined by the owners, whereas political regulation is only selective.

Precondition for active implementation is that the owner has a high degree of expertise, as well as the material resources to conduct the measures he takes in the forest. Large forest owners built up these resources as forestry enterprises which comprise organized special know-how, physical labor and material resources. From the owner's point of view, the business operation is an instrument for the direct realization of his interests in the forest.

In the scope of the market economy, owners of small forests, particularly those with less than half a hectare, have numerous disadvantages. Only with great effort can they come about sufficient expertise and material resources to manage their forests. As suppliers of small volumes of timber, they have difficulty finding buyers and obtain low prices. By merging their forests, the owners can improve their position. Private mergers of individual forestry enterprises are legally known as "forestry cooperatives," and public mergers as "forestry corporations." Forestry cooperatives and corporations may also establish greater organizations known as "forestry associations." These organizations are given preferential treatment in the form of advisory services and financial support from the state for the purpose of improving the structural weaknesses of small private forests (Niesslein 1985, p. 90). The owners welcome the expertise and material resources resulting from the merger, while at the same time, the merger means that they partially renounce their freedom of action concerning their own forest (Dürstein 1996). Each owner has to come to an agreement about his decisions with the other owners and can only take action through the business management. Since the business manager usually has a great influence over the numerous individual owners (Neumann 1984), the individual owner's freedom of decision is additionally restricted. The generally limited willingness of small forest owners to enter into business cooperatives reflects their experience that even this loose form of merger visibly restricts their freedom as property owners. A merger improves the group's success in asserting itself at the price of reducing the individual member's influence.

On a social level, property ownership is highly protected by law (cf. Example 4).

Example 4: Property Rights in the Basic Law Code of Germany (Article 14)

- 1) *Property rights and the law of succession are guaranteed. Object and limitations are regulated by the law.*
- 2) *Ownership obligates the owner. The use of his property should also serve towards public welfare.*
- 3) *Expropriation is only permitted if it serves towards public welfare. It may only take place according to a law which regulates the type and extent of compensation. Compensation is to be determined by justly weighing the interests of public welfare and those involved. In the case of a dispute regarding the extent of compensation, it may be contended in public court.*

By guaranteeing property ownership as a "basic right," the basic law code makes a value-judgement in favor of ownership (Niesslein 1980; p. 76). The forest owner is granted the right to refuse all other claims. The legislator assumes that the utilization of forest property will simultaneously serve towards public welfare. The model forest owner realizes private interests in utilizing his forest and at the same time manages it so that the public services from protection to recreation are provided, in as far as necessary. This means that forest property can only be limited in terms of its property lines, rather than by means of public demands, such as those made by the people, special administrators or political players. Moreover, the laws are not free to limit forest ownership, instead they are bound by the nature of the basic guarantee of property ownership. The abolition of forest ownership, even in a limited scope such as urban recreation areas or avalanche protection forests, would not be upheld by law either.

Since laws alone determine the limits of forest ownership, politics can define forest ownership by further developing those laws. Based upon the various political objectives and powers, the special obligation of forest ownership towards public welfare is standardized accordingly. Public welfare can also call for expropriation in special cases. Then the owner is always entitled to compensation.

This approach to the legal protection of property leads in practice to three main problems, which are the subject of legislation, law enforcement and jurisdiction: 1) definition of ownership; 2) compensation for restrictions; and 3) limitations for expropriation and compensation.

- 1) Forest ownership is defined according to numerous legal norms, including the Federal Forest Act, in particular. Among others are the duty to maintain the forest and properly manage it, the afforestation limitations, the special regulations for protective and recreational forests, and the general right of access for the purpose of recreation. Politics limit the owner's freedom in the interest of public welfare, without abolishing ownership as such.
- 2) The owner has to accept the limitations to a certain degree in the sense of "social obligations," without expecting compensation. In return for accepting these reasonable burdens, however, he may expect voluntary "compensation payments" from the state as a reimbursement for special use of individual forests. In connection with compensation payments, the state can restrict forest ownership more than it otherwise could, without going as far as property expropriation (Wagner 1994). This is related to interventions which partially or completely prohibit a formerly permitted utilization of forest property, or which result in a significant reduction of value. The limits are drawn for each individual case with respect to further legal considerations which cannot be covered by a general stipulation (Klose & Orf, p. 158). Those legal forest regulations surpassing social obligations generally apply to the area of compensatory stipulations. The laws stipulate various fees to be paid in the case of failed conversion, maintenance costs for failed re-afforestation; or subsidies if forestland is declared to be a protective or recreational forest.
- 3) If the limitations are extensive, this will result in expropriation obligating the state to compensate the owner. Expropriation is an official act which takes away a certain piece of property from its owner. It always requires a specific legal basis. A value guarantee takes the place of a stock or inventory guarantee in the course of legal expropriation. For the purpose of legal certainty, the corresponding compensation is not determined according to a general norm, instead the individual forms of reimbursement are stipulated by law.

In addition to the law, the acceptance of the general population influences property ownership in society. The high esteem held by private property owners in Germany results in a high legitimization of private forest property. Despite this, the concept of forest ownership suffers under the illusion of wealth in comparison to ownership of other assets (Burghardt 1980, p. 74).

The good visibility of large pieces of forestland, belonging entirely to one private individual, potentially gives the impression of being socially inappropriate. The larger the size of private forest property, the greater the problem of public acceptance in comparison with other types of assets. In contrast, ownership of small private forests awakens far more trust in the population (Lenz 1983, p. 84). The small forest owned by a farmer benefits from the traditionally great popularity that farmers enjoy. In comparison, the large private forest owner tries to avoid the public spotlight. He integrates his image into that of the entire sector of private forest owners, which comprises 95% small forest owners. In addition, all forest owners point out their contribution to the maintenance of the forest, a natural element for which the general population has the highest sympathy. Public services, such as that of securing free enterprise and democracy, are also used as arguments to increase the acceptance of private forest ownership.

4.2. Forest Workers and Employees

In addition to the owners, forest workers and employees are a central factor in managing forest utilization, since their work enables forestry production. In contrast to the owners, they do not have autonomous access to the forest.

Forest workers and employees are those who utilize the forest on the basis of a working relationship and thus participate in forestry production.

A working relationship is based upon a private contract between worker or employee and employer. The contract stipulates the working conditions and the payment and thereby justifies working for someone else in a dependent relationship with the employer. Civil servants also have such a dependent working relationship, although in public service they have somewhat different rights and duties.

The number of jobs in the German forest sector comprised around 13,000 civil servants and employees, as well as 40,000 workers in the year 1995. Since 1970, the number of workers decreased by 50%, whereas the number of employees decreased by about 5%. The reduction of employees mainly took place in private and corporate forestry enterprises, whereas state forestry enterprises have only begun to follow the trend lately. Despite this

considerable reduction, the employees and workers are, in addition to the forest itself, the greatest economic production factor, as shown by their share of the operating costs in terms of wages, salaries and social costs, which is around 70% in state forests and 43% in private forests. From the employee's perspective, these are naturally not costs, rather the share in production from which they benefit.

The employees' or worker's interests are in competition with those of the owner. In a specific business situation, the development of interests depends on the general needs of the employees. Employees' or workers' needs may be defined in three groups which are hierarchically related to each other (Alderfer, as cited by Schwarzer 1996, p. 169).

- 1) Job and income security are existential needs. Prevention of job loss has a high priority with employees and workers. However, this cannot be guaranteed by private business operations. A lack of profitability in timber production over the past decades has led to a continuous reduction of forestry jobs, and this has now reached the administrative level, including that of state forestry enterprises. Although forestry is neither able to contribute strongly nor dependably to securing human existence, no matter which policy it follows, the quality of existing jobs is on the increase. Both job security and income have improved lately. Conflicts with the owners regarding income distribution are resolved according to whichever party is able to best assert its interests.
- 2) Interpersonal needs are only developed after existential ones have been secured. These have to do with good cooperation among colleagues and their superiors, and workers or employees repeatedly emphasize how important this is. In this area there are no conflicts regarding task distribution, since good cooperation burdens neither the administration nor the owner and is actually considered to promote productivity according to the concepts of cooperative leadership. Although the concept of cooperative leadership prevails in forestry today, its implementation is lacking in administrative practise (Teutenberg-Raupach 1995). This is also a result of the general conditions in public enterprises, which are based upon the traditional administrative principle of hierarchical leadership.
- 3) On another scope, the need develops for growth and self-fulfillment. Self-management of tasks, self-realization on the job, as well as promotion, are at the focus of attention. These needs become evident

on a subsidiary level, once the needs on the other levels have already been fulfilled. The forest sector encompasses a wealth of outstanding personalities, all of whom were once in interdependent working relationships, although they conducted their forestry work like entrepreneurs. Sooner or later conflicts with the owners regarding business management thus arise, whereby there has been considerable freedom giving rise to the development of leading officials which have characterized the image of the successful "forester."

In promoting their interests, workers and employees rely upon two potential forces. First of all, they alone control their own working force, including their special expertise. The refusal of the collective working force can force production to halt.

Long beforehand the working force and applied know-how will noticeably decrease, and this already threatens to weaken any business operation and adversely affects the owner's interests. However, the refusal to work reaches a limit wherever the employees need the resources from their production for their own survival, if they cannot produce them without the owner's cooperation. These basic power potentials oppose each other in working conflicts, even though they have always been settled mildly in Germany, in particular. Another of the employees' power potentials constitutes the material and procedural rights which are granted to them by the state.

Working relationships are regulated by employment of these instruments of power, resulting in the regulation of conflicts of interest in three processes (Fürstenberg 1985):

- 1) In the case of the model contract, both sides conclude a working contract which regulates working conditions and payment. They are each supported by their own unions, which also conclude general tariff agreements on a higher level. On an internal level, employees and employer face each other like business partners. On a higher level, negotiations among tariff partners take on a strongly political character, and power strategies are more clearly noticeable.
- 2) The cooperative model standardizes procedures in each business so that workers or employees and employer can deal with the problems of a working relationship cooperatively. Through these procedures, employers grant employees the right of information, the right of

hearing and the right of consultation or codetermination to a precisely defined degree. Concerning economic issues, the employer always has the upper hand with the full power of decision making, as well as regarding personnel issues and specific working conditions. However, he does relay information about these issues to his employees. Codetermination mainly takes place concerning the issues of job security and health protection. Works councils are important for ensuring effective procedures. Works councils have not generally been set up in private forestry enterprises, also due to the low number of employees, however they have achieved great significance in public forest administration bodies.

- 3) According to the regulatory model, the state standardizes important aspects of the working relationship. Labor law, including the employee protection law, the dismissals protection law or the maternity protection law, provides a regulatory framework which can be implemented by means of sanctions (German Labor Law 1998).

In the scope of formal proceedings, employees and employers settle their conflicts of interests supported by informal strategies. Generally, the following factors informally repress the worker's or employees' interests: I) domination of property by owners; II) small scale of business operations; III) marginal involvement of workers and employees in the trade union; and IV) strong position in the job market (Trinczek 1995). These predominant factors in private forestry enterprises lead to the postulation that workers and employees have an informally weaker position, although empirical surveys confirming this are not available. In as far as this is the case, either an uncooperative leadership style will be formed in the name of the entrepreneur's freedom, or a patriarchal leadership style, if the family management concept prevails in the business operation. In contrast, a strong works council ensures pragmatic power-related codetermination in public forest administration bodies, where the staff representatives ascertain how much can be achieved and go about implementing it.

Concerning employee or worker codetermination in particular and labor policy in general, there are no special surveys available for the forest sector. Forestry ergonomics and management, which scholarly dwell on the factor of labor, both exclude political issues. The almost complete negligence of such issues by forest policy studies is further indication of the weak position of workers and employees, also regarding forest research policy in Germany.

4.3. The General Population

In addition to forest owners and their workers or employees, who have direct input in managing forestry production, the members of general population are the third important forest users, since they have direct access to forests, as well as managing their own significant business and political activities.

The general population is constituted by the citizens of a political community

Forest owners and their workers or employees also belong to the general population and, at the same time, they participate as such in their various roles in forestry production.

The interests of the general population in the forest are formed by everyday activities which are, in turn, determined by their work and leisure time. In the industrialized society in Germany, e.g., most people's work has nothing to do with forests. In contrast with agrarian societies, the problems related to forestry production are considered far-removed by the members of the general population. Only in during leisure time, which is gaining significance throughout the working world (Opaschowski 1995), does the forest arouse their interest as a part of nature. Both the lacking connection to timber production and equating of forests with nature result in a yawning gap between the average citizen's perspective and the concept of multifunctional forestry, which is the forester's idea of a citizen's interest in "protective and recreational benefits." The world, as experienced by the general population, determines how personal interests are formed, rather than the concepts of forestry.

The distinguishing factors of the general population's interest in forests is the great diversity and internal tendency towards conflict. The great sympathy, which over 90% of the German population has for forests and wood as a part of nature (Institut für Demoskopie, Allensbach 1999), does not automatically result in a marked or uniform interest in forests used for timber production. The general population is little affected by "forestry" factors; its focus is on benefiting from the forest and nature during leisure time. These two aspects are very differently assessed by individual citizens. The milieu a person belongs to has an influence on his (or her) interests in using the forest (Braun

1999). The social circles can be characterized as different milieus according to existential outlook, education and age (Schulze 1996). At present, the "world of self-fulfillment" of those under 50 in an academic milieu contrasts with the "world of entertainment" of the workmen and blue-collar employees. In the age group over 50 years old, those who are highly educated and hold top-level positions in a "sophisticated milieu" contrast with the so-called "integrated milieu" of middle-class employees and craftsmen, and those who lead a "simple life," including workmen and pensioners. Although such a rough classification of the population greatly simplifies the actual diversity of society, it serves to provide a valuable indication of people's varying interests in utilizing forests. As a natural contrast to the everyday working world, as well as a place for recreational activity, particularly the more highly educated individuals like to make use of forests. However many other leisure-time interests prevent those belonging to the world of self-fulfillment from doing so, whereas a work-related lack of time increasingly prevents those who hold high positions in the so-called "sophisticated milieu." In the "integrated milieu," the forest serves primarily as a place for walking the dog or going for a weekend trip. Those who belong to the entertainment milieu" prefer passive, leisure-time entertainment and are too inactive to spend time in a forest, unless they do so with their family and children. According to the respective milieu, childhood experiences in forests, such as gathering mushrooms, watching forest animals, hunting and logging are differently assessed. The significance of forests for society, in terms of oxygen generation and maintenance of clean air, is recognized by most people. However only those in higher positions particularly emphasize the emotional importance of the forest. The phenomenon of forest die-back has primarily disturbed younger people, whereas members of the "sophisticated" or "integrated milieu" may consider the warnings about this danger to be exaggerated.

As confirmed by the insight into the various milieus and by the numerous surveys conducted over the past decades, the average citizen's interests are focussed on conserving nature in forests and on using them as places of recreation. In addition, the forest's contribution towards protecting mankind's living space is valued. Not least of all, forests are considered a valuable cultural good practically attaining the mythical status of a pristine and intact world (Krott 1987).

To realize their interests, people only partially require physical access to forests. The myth and the environmental impact of the forests in preventing looming threats can be secured without a person ever having to set foot in a forest. However the public needs the support of (forest) policy to realize its

very strong interests in forest protection (Pauli 1999). Although politicians always profess to stand up for forest protection in public, the actual protection provided is far less than that expected by the public, e.g. against pollution or conversion. The interests of those seeking recreation can be satisfied through their direct access. In Germany, the forests can be accessed without great obstacle and used for various leisure activities. Correspondingly, walking, hiking, mountain biking, horseback riding and other sports count among the widespread activities that take place in nature, including the forest. These recreational uses lead to diverse conflicts, both amongst themselves, as well as with others who use forests or promote nature protection (Ammer & Pröbstl 1991). Economic burdens on forestry enterprises arising from nature protection and recreational functions of forests are a benchmark of the conflicts with forestry. The additional expenditures for recreational installations, maintenance or surveillance, waste disposal, regulatory measures, etc., and the reduced proceeds caused by damage to stock, prolongation of rotation period, and reduction of hunting, among others, sum up to around 25 EUROS per hectare of forest annually in Germany over the past decade (Dahm et al. 1999). The costs amount to around three times as much in state forests than in private forests. These figures indicate considerable lobbying from those seeking recreation, which public forests also have to accept for informal reasons, even if they do not receive any financial compensation in return.

In Germany, a person can refer to the Federal Forest Act which permits access to forests for recreational purposes, including cycling and horseback riding on paths. This stipulation in the Federal Forest Act, including further regulations in the forest laws of the individual states, legalizes the long established right of access to the open countryside. Although these regulations provide means of limitation and control, they grant the general population the highly significant basic right to forest recreation, which forest owners even have to permit against their will as one of their social obligations.

4.4. Further Forest Policy Research

Ownership is one of the most effective policy control mechanisms in the forest sector, and forest owners thus play a central role in forest policy. This has a dual impact on research. On the one hand, almost all forest sector research touches upon forest ownership, especially in the fields of forest economics and forest law. On the other hand, the analyses, which directly

and critically refer to forest ownership, deal with basic values that are backed up by powerful lobby groups. The elaboration of limits and alternatives regarding public or private ownership is among the research topics which lead quickly to conflicts with forestry in practice.

The significance of forest ownership for society and business is examined in the study of economics more closely in the field of "*Ordnungspolitik*" (i.e. an economy's institutional and regulatory framework). The forms of ownership count among the constitutive elements of the economic system or regime (Thieme 1995). This regime views political economics as a framework which is established outside the field of "policy making." The analyses formulate the regulatory standards and compare them with the state of development in the forest sector. Using this approach, Borchers (1996) examines the state forest operations in detail, with the result that both the interconnection of the tasks of sovereignty and management, as well as state forest management as such, do not fulfill the regulatory ideals. These would be better fulfilled by means of a comprehensive transition into private ownership rights. Full public forest ownership would only be legitimate in regulatory terms in the case of forestlands with public priorities. As a consequence of the large percentage of state forests, the optimum economic efficiency cannot be achieved in forestry, so that the privatization of large parts of the state forests would be called for economically. However, Borchers's analysis is not based on an empirical comparison of private and state forestry enterprises, rather on model assumptions of the behavior of private and state forest owners.

Forest business administration undertakes a detailed examination of the processes in state and private forest operations. It analyzes the economically rational action taken by the business operations, and thus indicates the potential scope of action for the owner of larger forestry enterprises, in cooperatives, as well as small privately owned forests. The main issue deals with the economic optimization of decisions regarding utilization (Möhring 1994). This makes it possible to gather essential information regarding the forest owner as a political player. However the equally important policy-related issues regarding the degree to which the owners want to adhere to economic goals, or the degree to which they can assert their interests within the forestry enterprise or outside it, cannot be resolved by economic studies alone.

This is where forest policy analysis comes into play with studies concerning the human nature. These studies preferably deal with small private forest owners, and the numerous empirical surveys which give information on their

forest utilization goals in both the new and the old states of Germany (incl. Lammel & Plochmann 1977; Steinkamp 1983; Köpf et al. 1995; Volz & Bieling 1998; Judmann 1998; Beck & Spiegelhoff 1999). The studies describe the current goals of forest owners and thus provide basic information for the development of forest policy tools, such as the improvement of alliances. However, the scholarly explanation for the attitude and the actions taken by the forest owners only has a modest rate of success, because it requires psychological theories which naturally have little power of explanation or prognostic capability in terms of the actions taken by a single individual. Psychological findings are helpful in policy analysis, yet they do not constitute the central research topic, since the role of the private forest owner is more politically significant than the psychology of individual persons. This role is characterized by the interests and power resources which determine the political action taken. The restitution of forests to their owners in the new states in the East of Germany illustrates the difference between the owners' psychological state of mind and their political role. Many small forest owners hardly knew what to do with their restituted forests at first, because they were not acquainted with the many possible forms of utilization, nor did they know about their responsibilities in this connection. Only in the course of time are they discovering the possibilities, and their interest-motivated courses of action are becoming characteristic for the role of small forest owners. The psychological capability of these persons influences how fast they become acquainted with the diverse facets of forest ownership.

The numerous legal studies, which examine forest ownership, take an entirely different approach. They are based on normative programs from which they derive the legal leeway and the social responsibilities of the forest owner. Niesslein (1980) developed a catalogue defining the limits between societal restrictions on individual property rights and expropriation. The special feature of this study is the legal assessment of detailed forestry utilization and problematic forest issues. Wagner (1996) elaborates the position of ownership, according to the new legal legislation, with special reference to nature and environmental protection. Wagner has developed a four-stage model regarding legally regulated financial compensation for limits imposed on ownership rights, from the calculation of the area to be compensated to voluntary compensation payments and support in the interest of the public. In keeping with the legal studies, these analyses are considered "legal and/or forest policy commentaries," which also provide information on desired future developments in legislation and jurisdiction (Klose & Orf

1998: p. 158). The real issue in (forest) policy studies deals with the significance allotted to the political process by its inherent legal standards.

There are currently no studies available which focus on the political dimension of forest ownership. Not even the process of privatization in the new states of Germany has yet been analyzed in scholarly terms, although a decisive political process with regard to the former owners and the duties of the state is taking place in forest ownership. However the small amount of research on ownership policy does not indicate a lack of significance of forest ownership. In contrast, it is one of the characteristics of highly influential political factors that they evade criticism, whether it be political or otherwise.

In Europe, studies on private forest owners are primarily to be found in the English-language literature published in Scandinavia. The values and behavioral patterns of non-industrial private forest owners are at the focus of interest (Kuuluvainen et al. 1996; Lönnstedt 1997; Törnqvist 1997; Karppinen 1998; Pykäläinen 2000; Hämäläinen et al. 2001; and Uliczka 2003). This group of forest owners does not conform well with the economic model of the forest enterprise and has therefore caught the attention of researchers interested in sociological and political approaches. The values and behavioral patterns of these owners have been recorded on an empirical basis, however their power of assertion has not become the subject of research. The application of property rights theory to forestry also indicates a close relationship to political science issues (Bisang & Kissling-Näf 2001).

In contrast, the individual person is a highly preferred subject of research in forest policy studies. A great number of surveys has attempted to record the opinions of individuals on forestry, as well as the forest. Schmithüsen (1997) and Pauli (1999) provide an overview of surveys of the general population related to forests since 1960. The results confirm the manifold expectation of the general population regarding the forest, as already discussed in connection with values. With an improved theoretical basis, such as that already cited in Braun's milieu concept (1999), new qualitative insights have been elaborated regarding the relationship of the individual person to the forest, and these can be supplemented by quantitative analyses in the future.

In comparison to the theoretical recordability and explicability of the general population's expectations and interests in the forest, however, it must be cautioned that the course of action of line of thought of any individual

person presents difficult problems in theoretical studies. The difficulties in the theoretical study of individual persons are repeatedly confirmed by election surveys, when the prognoses are proven wrong on election day despite extensive theoretical and empirical work. It is much more promising to postulate theories on the course of action taken by institutions, as well as the options which they give the individual to assert his or her interests. The courses of action taken by business enterprises, associations, political parties and administrative bodies can be more easily recorded, explained and predicted by political science. Forest policy studies should therefore not expect the behaviour of each individual to be explained to formulate an explanation of political interplay. In contrast, the institutions can already directly serve as the subjects of research, in addition to the general population and the forest owners, as elaborated in the following chapters.

Opinion polls of the general population are also a preferred method of research in European forest research, however only few results are available in English (Kangas & Niemeläinen 1996; Jensen 1993; Rametsteiner 1999). One of the focal points in Scandinavia is research on the expectations of the general population regarding the performance of the forest as a place of recreation (Pouta et al. 2000; Sievänen 1995; Sievänen 2000).